GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: April 2, 2003, 16:39:48 ; Search time 30.0129 Seconds
(without alignments)
1247.577 Million cell updates/sec

Title: US-09-807-452-2
Perfect score: 1492
Sequence: 1 MAVNVYSTSVTSENLSRHDM.....FAPPEDDEIEEHQQEDQDEY 281

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_101002:*
1: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
2: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
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23: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1492	100.0	281	21	AAY84891	A human proliferat
2	909.5	61.0	268	18	AAW01750	EcoRI binding frag
3	909.5	61.0	268	23	ABB57105	Mouse ischaemic co
4	909.5	61.0	311	21	AAB43793	Human cancer assoc
5	909.5	61.0	311	22	AAG73870	Human colon cancer
6	895.5	60.0	327	19	AAW48626	Human adenomatous
7	895.5	60.0	327	21	AAB43104	Human ORFX ORF2868
8	857	57.4	305	22	AAU30532	Novel human secret
9	782	52.4	291	22	ABB59772	Drosophila melanog
10	782	52.4	291	22	ABB66121	Drosophila melanog
11	496	33.2	286	21	AAG13505	Arabidopsis thalia
12	496	33.2	287	21	AAG13504	Arabidopsis thalia
13	496	33.2	293	21	AAG13503	Arabidopsis thalia
14	483	32.4	316	21	AAG47797	Arabidopsis thalia
15	483	32.4	317	21	AAG47796	Arabidopsis thalia
16	483	32.4	323	21	AAG47795	Arabidopsis thalia
17	468	31.4	282	21	AAG53819	Arabidopsis thalia
18	468	31.4	283	21	AAG53818	Arabidopsis thalia
19	468	31.4	289	21	AAG53817	Arabidopsis thalia
20	456.5	30.6	289	21	AAG51414	Arabidopsis thalia
21	456.5	30.6	290	21	AAG51413	Arabidopsis thalia
22	456.5	30.6	296	21	AAG51412	Arabidopsis thalia
23	453	30.4	322	21	AAG06388	Arabidopsis thalia
24	453	30.4	323	21	AAG06387	Arabidopsis thalia
25	453	30.4	329	21	AAG06386	Arabidopsis thalia
26	435	29.2	231	22	ABB66777	Drosophila melanog
27	396	26.5	120	22	AAB87617	Bovine mammary tis
28	295	19.8	357	22	ABB70413	Drosophila melanog
29	169	11.3	486	22	ABB11076	Human Na channel p
30	153.5	10.3	521	22	ABB59537	Drosophila melanog
31	133	8.9	51	21	AAG53905	Arabidopsis thalia
32	130.5	8.7	58	23	ABP35035	Human ORF4008 prot
33	106	7.1	42	21	AAG53906	Arabidopsis thalia
34	98	6.6	39	21	AAG53907	Arabidopsis thalia
35	97.5	6.5	396	23	AAE17498	Human secretion an
36	97	6.5	522	21	AAG23170	Arabidopsis thalia
37	95	6.4	493	21	AAG23171	Arabidopsis thalia
38	95	6.4	810	21	AAY73351	HTRM clone 1484257
39	94.5	6.3	523	22	ABB69771	Drosophila melanog
40	94.5	6.3	835	22	ABG04762	Novel human diagno
41	93.5	6.3	276	22	AAB94467	Human protein sequ
42	93.5	6.3	631	22	ABB58133	Drosophila melanog
43	89.5	6.0	1294	20	AAY39633	Zea mays Rpg1-2 pr
44	89	6.0	550	22	ABB50211	Human transcriptio
45	89	6.0	957	22	ABB70828	Drosophila melanog

ALIGNMENTS

RESULT 1
AAY84891
ID AAY84891 standard; Protein; 281 AA.
XX
AC AAY84891;
XX
DT 21-AUG-2000 (first entry)
XX
DE A human proliferation and apoptosis related protein.
XX
KW Human; proliferation and apoptosis related protein; PROAP; psoriasis;
KW cell proliferative disorder; immunological disorder; hepatitis;
KW reproductive disorder; arteriosclerosis; cirrhosis; melanoma; lymphoma;
KW cancer; acquired immune deficiency syndrome; AIDS; allergy; anaemia;
KW asthma; diabetes mellitus; osteoarthritis; endometriosis;
KW uterine fibroid; menstrual cycle.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Modified-site 44
FT /note= "potential phosphorylation site"
FT Modified-site 120
FT /note= "potential phosphorylation site"
FT Modified-site 143
FT /note= "potential phosphorylation site"
FT Modified-site 180
FT /note= "potential phosphorylation site"
FT Modified-site 225
FT /note= "potential phosphorylation site"
FT Modified-site 232
FT /note= "potential phosphorylation site"
FT Modified-site 245

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FT                  /note= "potential phosphorylation site"
FT   Modified-site  284
FT                  /note= "potential phosphorylation site"
FT   Modified-site  285
FT                  /note= "potential phosphorylation site"
FT   Modified-site  295
FT                  /note= "potential phosphorylation site"
XX
PN   WO200023589-A2.
XX
PD   27-APR-2000.
XX
PF   19-OCT-1999;   99WO-US24511.
XX
PR   20-OCT-1998;   98US-0172216.
PR   04-FEB-1999;   99US-0118559.
PR   11-FEB-1999;   99US-0172229.
PR   22-APR-1999;   99US-0154336.
XX
PA   (INCY-) INCYTE PHARM INC.
XX
PI   Tang YT,  Yue H,  Hillman JL,  Guegler KJ,  Corley NC,  Lal P;
PI   Azimzai Y,  Baughn MR,  Yang J,  Shih LL;
XX
DR   WPI; 2000-339688/29.
DR   N-PSDB; AAA14991.
XX
PT   New human proliferation and apoptosis related protein polypeptides used
PT   for diagnosis, treatment and prevention of cell proliferative,
PT   immunological and reproductive disorders -
XX
PS   Claim 1; Page 89-90; 128pp; English.
XX
CC   The present sequence represents a human proliferation and apoptosis
CC   related protein (PROAP). The polypeptides and polynucleotides can be
CC   used for the diagnosis, treatment and prevention of cell proliferative,
CC   immunological and reproductive disorders. Disorders associated with
CC   decreased expression or activity of include arteriosclerosis, cirrhosis,
CC   hepatitis, psoriasis, melanoma, lymphoma and cancers of the breast,
CC   brain and prostate, acquired immune deficiency syndrome (AIDS),
CC   allergies, anaemia, asthma, diabetes mellitus, osteoarthritis,
CC   endometriosis, uterine fibroids and disruptions of the menstrual cycle.
CC   Antibodies against PROAP can be use in diagnosis of disorders
CC   characterized by PROAP e.g. in ELISA (enzyme linked immunosorbent
CC   assays) and the polynucleotides may be used to detect and quantify gene
CC   expression in biopsied tissues. These techniques can also be used to
CC   monitor regulation of PROAP levels during therapeutic intervention.
XX
SQ   Sequence   281 AA;

  Query Match            100.0%;  Score 1492;  DB 21;  Length 281;
  Best Local Similarity  100.0%;  Pred. No. 2.7e-146;
  Matches  281;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60

Qy     61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120

Qy    121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLIGTAVPQRTSPTGPKNMQTSGRLSNVAP 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLIGTAVPQRTSPTGPKNMQTSGRLSNVAP 180

Qy    181 PCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDIELICQEH 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 PCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDIELICQEH 240

Qy    241 ESENSPVISGIIGILYATEEGFAPPEDDEIEEHQQEDQDEY 281
          |||||||||||||||||||||||||||||||||||||||||
Db    241 ESENSPVISGIIGILYATEEGFAPPEDDEIEEHQQEDQDEY 281
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RESULT 2
AAW01750
ID   AAW01750 standard; Protein; 268 AA.
XX
AC   AAW01750;
XX
DT   04-SEP-1997  (first entry)
XX
DE   EcoRI binding fragment protein 1 (EB1).
XX
KW   EB1; EcoRI Binding Fragment protein 1; cellular; APC; truncation;
KW   adenomatous polyposis coli; tumour suppressor; sporadic; familial;
KW   colorectal cancer; predisposition; diagnosis; neoplasm; treatment.
XX
OS   Homo sapiens.
XX
PN   WO9637611-A1.
XX
PD   28-NOV-1996.
XX
PF   22-MAY-1996;   96WO-US07747.
XX
PR   22-MAY-1995;   95US-0446919.
XX
PA   (UYJO ) UNIV JOHNS HOPKINS.
XX
PI   Kinzier K,  Vogelstein B,  Kinzler K;
XX
DR   WPI; 1997-021220/02.
DR   N-PSDB; AAT59331.
XX
PT   EB1 DNA and polypeptide(s) - used to determine a pre-disposition to
PT   or diagnose neoplasms and to assess treatment options.
XX
PS   Claim 5; Page 19-21; 45pp; English.
XX
CC   This sequence is that of an EB1 protein (EcoRI Binding Fragment protein
CC   1). This cellular protein associates with the carboxyl terminus of APC
CC   (adenomatous polyposis coli) tumour suppressor gene product. The APC
CC   tumour suppressor gene plays an important role in the development of both
CC   sporadic and familial forms of colorectal cancers. Because most APC
CC   mutations result in the truncation of the APC protein, these mutant APC
CC   proteins cannot associate with EB1.  This suggests that the interaction
CC   between APC and EB1 is important for the normal function of APC and that
CC   loss of this association is essential for the development of colorectal
CC   cancer. By assaying for the presence of APC-EB1 protein complexes in a
CC   cell, a predisposition to or diagnosis of neoplasms can be determined.
CC   EB1 can also be used to assess treatment options for cancer cells (which
CC   are good candidates for treatment with cyclooxygenase inhibitors).
XX
SQ   Sequence   268 AA;

  Query Match            61.0%;  Score 909.5;  DB 18;  Length 268;
  Best Local Similarity  64.6%;  Pred. No. 8e-86;
  Matches  186;  Conservative   28;  Mismatches   47;  Indels   27;  Gaps    6;

Qy      1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
          ||||||||||||:||||||||||:|:|| || ||||||||||||||||||| : |:|
Db      1 MAVNVYSTSVTSDNLSRHDMLAWINESLQLNLTKIEQLCSGAAYCQFMDMLFPGSIALKK 60

Qy     61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
          ||||||||||| |||:||| ||:|||||||||:|||||||||||||:||||||||||
Db     61 VKFQAKLEHEYIQNFKILQAGFKRMGVDKIIPVDKLVKGKFQDNFEFVQWFKKFFDANYD 120

Qy    121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLI--GTAVPQRTSPT-----GPKNMQTSG 173
          ||||:|: ||||| |  |:      || || :   :| |||   |      ||
Db    121 GKDYDPVAARQGQETAVAPSLVAPALNKPKKPLTSSSAAPQRPISTQRTAAAPK------ 174

Qy    174 RLSNVAPPCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDI 233
              | | ::||| |   ||    | :  || ||:  ||||: ||||||||| |||:|
Db    175 -----AGPGVVRKN-PGVGNG----DDEAAELMQQVNVLKLTVEDLEKERDFYFGKLRNI 224
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Qy    234 ELICQEHESENSPVISGIIGILYATEEGFAPPEDDEIEEHQQEDQDEY 281
          ||||||:| || ||:  |: |||||:|||  |:    |   ||:|:||
Db    225 ELICQENEGENDPVLQRIVDILYATDEGFVIPD----EGGPQEEQEEY 268


RESULT 3
ABB57105
ID   ABB57105 standard; Protein; 268 AA.
XX
AC   ABB57105;
XX
DT   07-MAR-2002  (first entry)
XX
DE   Mouse ischaemic condition related protein sequence SEQ ID NO:239.
XX
KW   Mouse; ischaemia; compressive ischaemia; occlusive ischaemia;
KW   vasospastic ischaemia; ischaemic condition; ischaemic disease.
XX
OS   Mus musculus.
XX
PN   WO200188188-A2.
XX
PD   22-NOV-2001.
XX
PF   18-MAY-2001; 2001WO-JP04192.
XX
PR   18-MAY-2000; 2000JP-0145977.
XX
PA   (UYNI-) UNIV NIHON SCHOOL JURIDICAL PERSON.
XX
PI   Ishikawa K,  Asai S,  Takahashi Y,  Nagata T,  Ishii Y;
XX
DR   WPI; 2002-034733/04.
DR   N-PSDB; ABI99354.
XX
PT   Examining the ischemic condition (e.g. occlusive ischemia) by measuring
PT   expression levels of particular genes defined in the specification or
PT   by determining the expression profile of a gene group comprising these
PT   genes -
XX
PS   Claim 2; Page 676-677; 2690pp; English.
XX
CC   The present invention describes a method for examining ischaemic
CC   conditions, comprising measuring the expression levels of particular
CC   genes (I) in a test sample or determining the expression profile of a
CC   gene group in the sample comprising genes selected from (I). The method
CC   is useful for examining the ischaemic condition (e.g. compressive
CC   ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring
CC   expression levels of particular genes (ABI99202 to ABI99912, encoding
CC   the protein sequences in ABB57020 to ABB57374) or by determining the
CC   expression profile of a gene group comprising these genes. The
CC   expression levels or expression profiles produced by these genes are
CC   used as an indicator when screening for ischaemic condition-improving
CC   drugs or therapeutics for ischaemic diseases. ABI99913 and ABI99914
CC   represent PCR primers for a mouse ischaemic condition related sequence,
CC   which are used in the exemplification of the present invention.
XX
SQ   Sequence   268 AA;

  Query Match             61.0%;  Score 909.5;  DB 23;  Length 268;
  Best Local Similarity   64.6%;  Pred. No. 8e-86;
  Matches  186;  Conservative   29;  Mismatches   46;  Indels   27;  Gaps    6;

Qy      1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
          |||||||||||||:||||||||||:|:|| || |||||||||||||||||||| : |:|
Db      1 MAVNVYSTSVTSDNLSRHDMLAWINESLQLNLTKIEQLCSGAAYCQFMDMLFPGSIALKK 60

Qy     61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
          |||||||||||| |||:||| ||:|||||||||:|||||||||||||:||||||||||||
Db     61 VKFQAKLEHEYIQNFKILQAGFKRMGVDKIIPVDKLVKGKFQDNFEFVQWFKKFFDANYD 120

Qy    121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLIG--TAVPQRTSPT-----GPKNMQTSG 173
          ||:|:|: |||||: |  |:      :| || :|  || |||   |      ||
Db    121 GKEYDPVAARQGQETAVAPSLVAPALSKPKKPLGSSTAAPQRPIATQRTTAAPK------ 174

Qy    174 RLSNVAPPCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDI 233
              | | ::||| |   ||    | :  || ||:  |||||: |||||||||| |||:|
Db    175 -----AGPGMVRKN-PGVGNG----DDEAAELMQQVKVLKLTVEDLEKERDFYFGKLRNI 224

Qy    234 ELICQEHESENSPVISGIIGILYATEEGFAPPEDDEIEEHQQEDQDEY 281
          ||||||:| || ||:  |: |||||:|||  |:    |   ||:|:||
Db    225 ELICQENEGENDPVLQRIVDILYATDEGFVIPD----EGGPQEEQEEY 268


RESULT 4
AAB43793
ID   AAB43793 standard; Protein; 311 AA.
XX
AC   AAB43793;
XX
DT   08-FEB-2001  (first entry)
XX
DE   Human cancer associated protein sequence SEQ ID NO:1238.
XX
KW   Human; cancer associated gene; cancer antigen; detection; cancer;
KW   diagnosis; cytostatic; proliferative; vulnerary; immunomodulator;
KW   antidiabetic; antiasthmatic; antirheumatic; antiarthritic; antiviral;
KW   antiinflammatory; antithyroid; antiallergic; antibacterial; cardiant;
KW   dermatological; neuroprotective; thrombolytic; coagulant; nootropic;
KW   vasotropic; antipsoriatic; antiangiogenic; gene therapy; inflammation;
KW   immune disorder; haematopoietic cell disorder; autoimmune disorder;
KW   allergic reaction; graft versus host disease; organ rejection;
KW   haemostatic; thrombolytic; cardiovascular disorder; infection;
KW   neurological disease; drug screening.
XX
OS   Homo sapiens.
XX
PN   WO200055350-A1.
XX
PD   21-SEP-2000.
XX
PF   08-MAR-2000; 2000WO-US05882.
XX
PR   12-MAR-1999;   99US-0124270.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Rosen CA,  Ruben SM;
XX
DR   WPI; 2000-587533/55.
DR   N-PSDB; AAC78002.
XX
PT   Novel isolated nucleic acids comprising sequences encoding peptides
PT   useful for treating or diagnosing e.g. cancer -
XX
PS   Claim 11; Page 1868-1869; 2352pp; English.
XX
CC   AAC77607 to AAC78448 encode the human cancer associated proteins given
CC   in AAB43398 to AAB44239. The proteins can have activities based on the
CC   tissues and cells the genes are expressed in. Example of activities
CC   include: cytostatic; proliferative; vulnerary; immunomodulator;
CC   antidiabetic; antiasthmatic; antirheumatic; antiarthritic;
CC   antiinflammatory; antithyroid; antiallergic; antibacterial; antiviral;
CC   dermatological; neuroprotective; cardiant; thrombolytic; coagulant;
CC   nootropic; vasotropic; antipsoriatic and antiangiogenic. The
CC   polynucleotides and polypeptides can be used for preventing, treating or
CC   ameliorating medical conditions and diagnosing pathological conditions.
CC   Polynucleotides, polypeptides, antibodies, agonists and antagonists from
CC   the present invention may be used to treat immune disorders by activating
CC   or inhibiting the proliferation, differentiation or mobilisation of
CC   immune cells, to treat disorders of haematopoietic cells, autoimmune
CC   disorders, allergic reactions, graft versus host disease and organ
CC   rejection, modulate haemostatic or thrombolytic activity, modulate
CC   inflammation, cancers, cardiovascular disorders, neurological disease and
CC   bacterial or viral infections. The peptides, nucleotides, antibodies,
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CC   agonists and antagonists may be also be used in drug screens. AAC78449 to
CC   AAC78457 and AAB44240 represent sequences used in the exemplification of
CC   the present invention.
XX
SQ   Sequence   311 AA;

  Query Match             61.0%;  Score 909.5;  DB 21;  Length 311;
  Best Local Similarity   64.6%;  Pred. No. 9.9e-86;
  Matches  186;  Conservative   28;  Mismatches   47;  Indels   27;  Gaps    6;

Qy       1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
           ||||||||||||:|||||||||||:|:|| || |||||||||||||||||||| : |:|
Db      44 MAVNVYSTSVTSDNLSRHDMLAWINESLQLNLTKIEQLCSGAAYCQFMDMLFPGSIALKK 103

Qy      61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
           |||||||||||| |||:||| ||:|||||||||:||||||||||||:|||||||||||
Db     104 VKFQAKLEHEYIQNFKILQAGFKRMGVDKIIPVDKLVKGKFQDNFEFVQWFKKFFDANYD 163

Qy     121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLI--GTAVPQRTSPT-----GPKNMQTSG 173
           ||||:|: |||||: |  |:       || || :   >| |||   |      ||
Db     164 GKDYDPVAARQGQETAVAPSLVAPALNKPKKPLTSSSAAPQRPISTQRTAAAPK------ 217

Qy     174 RLSNVAPPCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDI 233
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Db     218 -----AGPGVVRKN-PGVGNG----DDEAAELMQQVNVLKLTVEDLEKERDFYFGKLRNI 267

Qy     234 ELICQEHESENSPVISGIIGILYATEEGFAPPEDDEIEEHQQEDQDEY 281
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Db     268 ELICQENEGENDPVLQRIVDILYATDEGFVIPD----EGGPQEEQEEY 311


RESULT 5
AAG73870
ID   AAG73870 standard; Protein; 311 AA.
XX
AC   AAG73870;
XX
DT   03-SEP-2001  (first entry)
XX
DE   Human colon cancer antigen protein SEQ ID NO:4634.
XX
KW   Human; colon cancer; colon cancer antigen; diagnosis; detection;
KW   colorectal carcinoma; chromosome 20.
XX
OS   Homo sapiens.
XX
PN   WO200122920-A2.
XX
PD   05-APR-2001.
XX
PF   28-SEP-2000; 2000WO-US26524.
XX
PR   29-SEP-1999;   99US-0157137.
PR   03-NOV-1999;   99US-0163280.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Ruben SM,  Barash SC,  Birse CE,  Rosen CA;
XX
DR   WPI; 2001-235357/24.
DR   N-PSDB; AAH33301.
XX
PT   Nucleic acids encoding 4277 human colon cancer-associated polypeptides,
PT   useful for preventing, diagnosing and/or treating colorectal cancers -
XX
PS   Claim 11; Page 6436-6437; 9803pp; English.
XX
CC   AAH32943 to AAH37195 and AAG73514 to AAG77788 represent human colon
CC   cancer-associated nucleic acid molecules (N) and proteins (P), where
CC   the proteins are collectively known as colon cancer antigens. The colon
CC   cancer antigens have cytostatic activity and can be used in gene
CC   therapy and vaccine production. N and P may be used in the prevention,
CC   diagnosis and treatment of diseases associated with inappropriate P
CC   expression. For example, N and P may be used to treat disorders
CC   associated with decreased expression by rectifying mutations or deletions
CC   in a patient's genome that affect the activity of P by expressing
CC   inactive proteins or to supplement the patients own production of P.
CC   Additionally, N may be used to produce the colon cancer-associated Ps,
CC   by inserting the nucleic acids into a host cell and culturing the cell
CC   to express the proteins. N and P can be used in the prevention, diagnosis
CC   and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204
CC   and AAB77789 represent sequences used in the exemplification of the
CC   present invention.
CC   N.B. Pages 666 to 682 and page 7053 of the sequence listing were
CC   missing at time of publication, meaning no sequences are present for
CC   SEQ ID NO:1027 to 1052, 7921 and 7922.
XX
SQ   Sequence   311 AA;

  Query Match             61.0%;  Score 909.5;  DB 22;  Length 311;
  Best Local Similarity   64.6%;  Pred. No. 9.9e-86;
  Matches  186;  Conservative   28;  Mismatches   47;  Indels   27;  Gaps    6;

Qy       1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
           ||||||||||||:|||||||||||:|:|| || |||||||||||||||||||| : |:|
Db      44 MAVNVYSTSVTSDNLSRHDMLAWINESLQLNLTKIEQLCSGAAYCQFMDMLFPGSIALKK 103

Qy      61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
           |||||||||||| |||:||| ||:|||||||||:||||||||||||:|||||||||||
Db     104 VKFQAKLEHEYIQNFKILQAGFKRMGVDKIIPVDKLVKGKFQDNFEFVQWFKKFFDANYD 163

Qy     121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLI--GTAVPQRTSPT-----GPKNMQTSG 173
           ||||:|: |||||: |  |:       || || :   :| |||   |      ||
Db     164 GKDYDPVAARQGQETAVAPSLVAPALNKPKKPLTSSSAAPQRPISTQRTAAAPK------ 217

Qy     174 RLSNVAPPCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDI 233
               | | ::||| |   ||    | :  || ||:  |||||: |||||||||| |||:|
Db     218 -----AGPGVVRKN-PGVGNG----DDEAAELMQQVNVLKLTVEDLEKERDFYFGKLRNI 267

Qy     234 ELICQEHESENSPVISGIIGILYATEEGFAPPEDDEIEEHQQEDQDEY 281
           ||||||:| || ||:  |: |||||:|||  |:    |   ||:|:||
Db     268 ELICQENEGENDPVLQRIVDILYATDEGFVIPD----EGGPQEEQEEY 311


RESULT 6
AAW48626
ID   AAW48626 standard; Protein; 327 AA.
XX
AC   AAW48626;
XX
DT   17-AUG-1998  (first entry)
XX
DE   Human adenomatous polyposis coli protein-binding protein RP1.
XX
KW   RP1; human; adenomatous polyposis coli; APC; T cell activation;
KW   lymphoma; colorectal cancer; ulcerative colitis; Crohn's disease;
KW   diagnosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 60
FT                   /note= "encoded by ATC"
FT   Misc-difference 61
FT                   /note= "encoded by ATT"
FT   Misc-difference 62
FT                   /note= "encoded by GCA"
FT   Misc-difference 63
FT                   /note= "encoded by TGG"
FT   Misc-difference 64
FT                   /note= "encoded by GTT"
FT   Misc-difference 65
FT                   /note= "encoded by AAT"
FT   Misc-difference 66
FT                   /note= "encoded by GAC"
FT   Misc-difference 67
```

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FT                   /note= "encoded by ATA"
FT   Misc-difference 68
FT                   /note= "encoded by GTA"
FT   Misc-difference 69
FT                   /note= "encoded by TCT"
FT   Misc-difference 70
FT                   /note= "encoded by AGA"
FT   Misc-difference 71
FT                   /note= "encoded by CAT"
FT   Misc-difference 72
FT                   /note= "encoded by GAC"
XX
PN   WO9807737-A1.
XX
PD   26-FEB-1998.
XX
PF   21-AUG-1997;   97WO-US14753.
XX
PR   21-AUG-1996;   96US-0701233.
XX
PA   (LUDW-) LUDWIG INST CANCER RES.
XX
PI   Pfreundschuh M,  Renner C;
XX
DR   WPI; 1998-169085/15.
DR   N-PSDB; AAV18077.
XX
PT   RP proteins associated with T cell activation and binding to
PT   adenomatous polypopsis coli protein - and assays for diagnosing
PT   e.g. colorectal cancer, or pre-disposition to it, and aberrant T
PT   cell activation, also related nucleic acid, vectors, transformed
PT   cells and antibodies
XX
PS   Claim 9; Page 22-23; 33pp; English.
XX
CC   This polypeptide comprises human RP1, a novel member of the EB1
CC   family which is associated with T cell activation, and which binds
CC   to normal, but not carboxy end-truncated, adenomatous polyposis coli
CC   (APC) protein.  RP1 was identified using a differential mRNA
CC   technique designed to isolate molecules which were differentially
CC   expressed following combined stimulation by CD3 and CD28 trigger
CC   molecules.  The full-length cDNA sequence was obtained by RACE PCR.
CC   RP2 and partial RP3 clones (see AAV18078 and AAV18079) were also
CC   identified.  A claimed method for determining expression of an
CC   aberrant form of APC protein involves contacting the sample with at
CC   least part of an RP protein (especially RP1, RP2 or RP3) able to
CC   bind to normal, but not aberrant APC protein, and measuring any
CC   binding of the APC protein to the RP protein.  Detecting aberrant
CC   APC protein can be used for diagnosis of, or determining
CC   predisposition to, colorectal cancer, ulcerative colitis and
CC   Crohn's disease.  A claimed method for screening for a disorder
CC   characterised by inappropriate T cell activation involves contacting
CC   a T cell sample with a nucleic acid encoding RP1, RP2 or RP3 and
CC   determining any hybridisation.  Such activation may indicate T-cell
CC   lymphoma and this could be treated with RP inhibitors.
XX
SQ   Sequence   327 AA;

  Query Match             60.0%;  Score 895.5;  DB 19;  Length 327;
  Best Local Similarity   58.2%;  Pred. No. 3e-84;
  Matches  171;  Conservative   46;  Mismatches   54;  Indels   23;  Gaps    5;

Qy       1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
           |||||||||:| | :||||::||||| : |||||:||||||||||||||||||||: |:|
Db      44 MAVNVYSTSITQETMSRHDIIAWVNDIVSLNYTKVEQLCSGAAYCQFMDMLFPGCISLKK 103

Qy      61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
           |||||||||||||||:|||:||:| |||:||||||||:|||| :|||||||:|||||
Db     104 VKFQAKLEHEYIHNFKLLQASFKRMNVDKVIPVEKLVKGRFQDNLDFIQWFKKFYDANYD 163

Qy     121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKL----IGTAVPQRTSPTG-----PKNMQT 171
           ||:|:|: |||||  |||:||:|||| ||      ||   ::||      |    :
Db     164 GKEYDPVEARQGQDAIPPPDPGEQIFNLPKKSHHANSPTAGAAKSSPAAKPGSTPSRPSS 223

Qy     172 SGRLSNVAPPCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLR 231
           : | |:            ||     : : |:::||:|:  ||| ::|:|||||||| |||
Db     224 AKRASSSG----------SASKSDKDLETQVIQLNEQVHSLKLALEGVEKERDFYFGKLR 273

Qy     232 DIELICQEHESENSPVISGIIGILYATEEGFAPPEDDEIEE--HQQE--DQDEY 281
           :|||:|||| ||  ::  :: ||||:||     |: | ||  |:|:   |:||
Db     274 EIELLCQEHGQENDDLVQRLMDILYASEEHEGHTEEPEAEEQAHEQQPPQQEEY 327


RESULT 7
AAB43104
ID   AAB43104 standard; Protein; 327 AA.
XX
AC   AAB43104;
XX
DT   08-FEB-2001  (first entry)
XX
DE   Human ORFX ORF2868 polypeptide sequence SEQ ID NO:5736.
XX
KW   Human; open reading frame; ORFX; detection; cytostatic; hepatotropic;
KW   vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
KW   anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
KW   immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
KW   hypotensive; dermatological; immunosuppressive; antiinflammatory;
KW   antiviral; antibacterial; antifungal; antirheumatic; antithyroid;
KW   antianaemic; gene therapy; cancer; proliferative disorder; hypertension;
KW   neurodegenerative disorder; osteoarthritis; graft vs host disease;
KW   cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
KW   cholesterol ester storage; systemic lupus erythematosus; infection;
KW   severe combined immunodeficiency; malaria; autoimmune disorder; asthma;
KW   allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
KW   bone damage; cartilage damage; antiinflammatory disease; coagulation;
KW   thrombosis; contraceptive.
XX
OS   Homo sapiens.
XX
PN   WO200058473-A2.
XX
PD   05-OCT-2000.
XX
PF   31-MAR-2000; 2000WO-US08621.
XX
PR   31-MAR-1999;   99US-0127607.
PR   02-APR-1999;   99US-0127636.
PR   05-APR-1999;   99US-0127728.
PR   30-MAR-2000; 2000US-0540763.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Shimkets RA,  Leach M;
XX
DR   WPI; 2000-602362/57.
DR   N-PSDB; AAC77313.
XX
PT   Novel nucleic acids and peptides derived from open reading frame X,
PT   useful for treating e.g. cancers, proliferative disorders,
PT   neurodegenerative disorders and cardiovascular disease -
XX
PS   Claim 11; Page 4899-4900; 5507pp; English.
XX
CC   AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397,
CC   which represent the human ORFX open reading frames 1 to 3161. The ORFX
CC   sequences have activities such as: cytostatic; hepatotropic; vulnerary;
CC   antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
CC   osteopathic; anticonvulsant; antiarthritic; immunosuppressant;
CC   immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
CC   antidiabetic; hypotensive; dermatological; immunosuppressive;
CC   antiinflammatory; antibacterial; antiviral; antifungal; antirheumatic;
CC   antithyroid; and antianaemic. The sequences can be used for determining
CC   the presence of or predisposition to, or preventing or treating
CC   pathological conditions associated with an ORFX-associated disorder. The
CC   nucleic acids can be used to express ORFX proteins in gene therapy
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CC   vectors. The proteins and nucleic acids may be used to treat cancers,
CC   proliferative disorders, neurodegenerative disorders, osteoarthritis,
CC   graft vs host disease, cardiovascular disease, diabetes mellitus,
CC   hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
CC   erythematosus, severe combined immunodeficiency (SCID), AIDS, viral,
CC   bacterial or fungal infection, malaria, autoimmune disorders, asthma,
CC   allergies, aplastic anaemia, burns, wounds, bone and cartilage damage,
CC   nocturnal haemoglobinuria, antiinflammatory disease; to enhance
CC   coagulation; to inhibit thrombosis; and as a contraceptive.
XX
SQ   Sequence   327 AA;

  Query Match             60.0%;  Score 895.5;  DB 21;  Length 327;
  Best Local Similarity   58.2%;  Pred. No. 3e-84;
  Matches  171;  Conservative   46;  Mismatches   54;  Indels   23;  Gaps    5;

Qy       1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
Db      44 MAVNVYSTSITQETMSRHDIIAWVNDIVSLNYTKVEQLCSGAAYCQFMDMLFPGCISLKK 103

Qy      61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
Db     104 VKFQAKLEHEYIHNFKLLQASFKRMNVDKVIPVEKLVKGRFQDNLDFIQWFKKFYDANYD 163

Qy     121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKL----IGTAVPQRTSPTG-----PKNMQT 171
Db     164 GKEYDPVEARQGQDAIPPPDPGEQIFNLPKKSHHANSPTAGAAKSSPAAKPGSTPSRPSS 223

Qy     172 SGRLSNVAPPCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLR 231
Db     224 AKRASSSG----------SASKSDKDLETQVIQLNEQVHSLKLALEGVEKERDFYFGKLR 273

Qy     232 DIELICQEHESENSPVISGIIGILYATEEGFAPPEDDEIEE--HQQE--DQDEY 281
Db     274 EIELLCQEHGQENDDLVQRLMDILYASEEHEGHTEEPEAEEQAHEQQPPQQEEY 327


RESULT 8
AAU30532
ID   AAU30532 standard; Protein; 305 AA.
XX
AC   AAU30532;
XX
DT   18-DEC-2001  (first entry)
XX
DE   Novel human secreted protein #1023.
XX
KW   Human; vaccination; gene therapy; nutritional supplement;
KW   stem cell proliferation; haematopoiesis; nerve tissue regeneration;
KW   immune suppression; immune stimulation; anti-inflammatory; leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200179449-A2.
XX
PD   25-OCT-2001.
XX
PF   16-APR-2001; 2001WO-US08656.
XX
PR   18-APR-2000; 2000US-0552929.
PR   26-JAN-2001; 2001US-0770160.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT;
XX
DR   WPI; 2001-611725/70.
XX
PT   Nucleic acids encoding a range of human polypeptides, useful in genetic
PT   vaccination, testing and therapy -
XX
PS   Claim 20; Page 306; 765pp; English.
XX
CC   The invention relates to novel human secreted polypeptides. The
CC   polypeptides and antibodies to the polypeptides are useful for
CC   determining the presence of or predisposition to a disease associated
CC   with altered levels of polypeptide. The polypeptides are also useful for
CC   identifying agents (agonists and antagonists) that bind to them. Cells
CC   expressing the proteins are useful for identifying a therapeutic agent
CC   for use in treatment of a pathology related to aberrant expression or
CC   physiological interactions of the polypeptide. Vectors comprising
CC   the nucleic acids encoding the polypeptides and cells genetically
CC   engineered to express them are also useful for producing the proteins.
CC   The proteins are useful in genetic vaccination, testing and
CC   therapy, and can be used as nutritional supplements. They may be used to
CC   increase stem cell proliferation; to regulate haematopoiesis; and in
CC   bone, cartilage, tendon  and/or nerve tissue growth or regeneration;
CC   immune suppression and/or stimulation; as anti-inflammatory agents; and
CC   in treatment of leukaemias. AAU29510-AAU33304 represent the amino acid
CC   sequences of novel human secreted proteins of the invention.
XX
SQ   Sequence   305 AA;

  Query Match             57.4%;  Score 857;  DB 22;  Length 305;
  Best Local Similarity   61.8%;  Pred. No. 2.7e-80;
  Matches  175;  Conservative   35;  Mismatches   59;  Indels   14;  Gaps    6;

Qy       1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
Db      35 MAVNVYSTSVTSDNLSRHDMLAWINESLQLNLTKIEQLCSGAAYCQFMDMLFPGSIALKK 94

Qy      61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
Db      95 VKFQAKLEHEYIQNFKILQAGFKRMGVDKIIPVDKLLKGKFQDNFEFVQWVKKFFDANYD 154

Qy     121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLI--GTAVPQRTSPTGPKNMQTSGRLSNV 178
Db     155 GKDYDPVAARQGQETAVAPSLVAPALNKPKKPLTSSSAAPQR-----PISTQRTAAAPKA 209

Qy     179 APPCILRKNPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDIELICQ 238
Db     210 GPLGVVRKN-PGVGNGDDEA-AELMQQGQRIXNL-LFEDLGGKERDFYFGKLRNIELICQ 266

Qy     239 EHESENSPVISGIIGILYATEEGFAPPEDDEIEEHQQEDQDEY 281
Db     267 ENEGENDPVLQRIVDILYATDEGFVILD----EGGPQEEQEEY 305


RESULT 9
ABB59772
ID   ABB59772 standard; Protein; 291 AA.
XX
AC   ABB59772;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster polypeptide SEQ ID NO 6108.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
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```
DR   WPI; 2001-656860/75.
DR   N-PSDB; ABL03875.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Disclosure; SEQ ID NO 6108; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   291 AA;

  Query Match             52.4%;  Score 782;  DB 22;  Length 291;
  Best Local Similarity   53.2%;  Pred. No. 1.6e-72;
  Matches  160;  Conservative   41;  Mismatches   62;  Indels   38;  Gaps    7;

Qy       1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
           ||||||||:|||||||||||||||||| |   ::|||:||:||||||||||||  | :::
Db       1 MAVNVYSTNVTSENLSRHDMLAWVNDCLQSQFSKIEELCTGAAYCQFMDMLFPNSVPVKR 60

Qy      61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
           |||:  |||||| |||:||| |||| |||||::|||||:|||||||:||||||||||||
Db      61 VKFRTNLEHEYIQNFKILQAGFKKMSVDKIIPIDKLVKGRFQDNFEFLQWFKKFFDANYD 120

Qy     121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLIGTAV----------------PQRTSPT 164
           |:||:    |:|     |   |       | | |||                 |  ||
Db     121 GRDYDASAVREG----APMGFGS---GAVKSLPGTAASGVSSSYRRGPSATTRPAMTSAV 173

Qy     165 GPKNMQTSGRLSNVAP-----PC-----ILRKNPPSARNGGHETDAQILELNQQLVDLKL 214
           |   :   | :| ||      |      ::||  |        : || |:: |::|:::
Db     174 KPTVSKVLPRTNNAAPASRINACANSTGTVKKNDVS----NSVNNQQIEEMSNQVMDMRI 229

Qy     215 TVDGLEKERDFYFSKLRDIELICQE-HESENSPVISGIIGILYATEEGFAPPEDDEIEEH 273
           ::|||||||||||||||||::|||  ::|  |:|  |: ||||||:|||||:|   |:
Db     230 NLEGLEKERDFYFSKLRDIEILCQEADDAEAHPIIQKILDILYATEDGFAPPDDAPPEDE 289

Qy     274 Q 274
           :
Db     290 E 290


RESULT 10
ABB66121
ID   ABB66121 standard; Protein; 291 AA.
XX
AC   ABB66121;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster polypeptide SEQ ID NO 25155.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   N-PSDB; ABL10224.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Disclosure; SEQ ID NO 25155; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   291 AA;

  Query Match             52.4%;  Score 782;  DB 22;  Length 291;
  Best Local Similarity   53.2%;  Pred. No. 1.6e-72;
  Matches  160;  Conservative   41;  Mismatches   62;  Indels   38;  Gaps    7;

Qy       1 MAVNVYSTSVTSENLSRHDMLAWVNDSLHLNYTKIEQLCSGAAYCQFMDMLFPGCVHLRK 60
           ||||||||:|||||||||||||||||| |   ::|||:||:||||||||||||  | :::
Db       1 MAVNVYSTNVTSENLSRHDMLAWVNDCLQSQFSKIEELCTGAAYCQFMDMLFPNSVPVKR 60

Qy      61 VKFQAKLEHEYIHNFKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYD 120
           |||:  |||||| |||:||| |||| |||||::|||||:|||||||:||||||||||||
Db      61 VKFRTNLEHEYIQNFKILQAGFKKMSVDKIIPIDKLVKGRFQDNFEFLQWFKKFFDANYD 120

Qy     121 GKDYNPLLARQGQDVAPPPNPGDQIFNKSKKLIGTAV----------------PQRTSPT 164
           |:||:    |:|     |   |       | | |||                 |  ||
Db     121 GRDYDASAVREG----APMGFGS---GAVKSLPGTAASGVSSSYRRGPSATTRPAMTSAV 173

Qy     165 GPKNMQTSGRLSNVAP-----PC-----ILRKNPPSARNGGHETDAQILELNQQLVDLKL 214
           |   :   | :| ||      |      ::||  |        : || |:: |::|:::
Db     174 KPTVSKVLPRTNNAAPASRINACANSTGTVKKNDVS----NSVNNQQIEEMSNQVMDMRI 229

Qy     215 TVDGLEKERDFYFSKLRDIELICQE-HESENSPVISGIIGILYATEEGFAPPEDDEIEEH 273
           ::|||||||||||||||||::|||  ::|  |:|  |: ||||||:|||||:|   |:
Db     230 NLEGLEKERDFYFSKLRDIEILCQEADDAEAHPIIQKILDILYATEDGFAPPDDAPPEDE 289

Qy     274 Q 274
           :
Db     290 E 290


RESULT 11
AAG13505
ID   AAG13505 standard; Protein; 286 AA.
XX
AC   AAG13505;
XX
DT   17-OCT-2000  (first entry)
XX
DE   Arabidopsis thaliana protein fragment SEQ ID NO: 13024.
XX
KW   Protein identification; signal transduction pathway; metabolic pathway;
KW   hybridisation assay; genetic mapping; gene expression control; promoter;
KW   termination sequence.
XX
```

OS Arabidopsis thaliana.
XX
PN EP1033405-A2.
XX
PD 06-SEP-2000.
XX
PF 25-FEB-2000; 2000EP-0301439.
XX
PR 25-FEB-1999; 99US-0121825.
PR 05-MAR-1999; 99US-0123180.
PR 09-MAR-1999; 99US-0123548.
PR 23-MAR-1999; 99US-0125788.
PR 25-MAR-1999; 99US-0126264.
PR 29-MAR-1999; 99US-0126785.
PR 01-APR-1999; 99US-0127462.
PR 06-APR-1999; 99US-0128234.
PR 08-APR-1999; 99US-0128714.
PR 16-APR-1999; 99US-0129845.
PR 19-APR-1999; 99US-0130077.
PR 21-APR-1999; 99US-0130449.
PR 23-APR-1999; 99US-0130510.
PR 23-APR-1999; 99US-0130891.
PR 28-APR-1999; 99US-0131449.
PR 30-APR-1999; 99US-0132048.
PR 30-APR-1999; 99US-0132407.
PR 04-MAY-1999; 99US-0132484.
PR 05-MAY-1999; 99US-0132485.
PR 06-MAY-1999; 99US-0132486.
PR 06-MAY-1999; 99US-0132487.
PR 07-MAY-1999; 99US-0132863.
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Qy      75 FKVLQAAFKKMGVDKIIPVEKLVKGKFQDNFEFIQWFKKFFDANYDG---KDYNPL--LA 129
           :||:|  | |: : | : | :|||:  || ||:|| |:| |:   |   ::|||:   :
Db      67 YKVMQEVFTKLKITKPLEVNRLVKGRPLDNLEFLQWLKRFCDSINGGIMNENYNPVERRS 126

Qy     130 RQGQDVAPPPNPGDQIFNKS---KKLIGTAVPQRTSPTGPKNMQTSGRLSNVAPPCILRK 186
           | |:: :     |    :||     :    |     | |||  :: |
Db     127 RGGREKSV---KGSSKISKSLQTNNMHHPPVATSNKPAGPKQAKSHG---------- 170

Qy     187 NPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDIELICQEHESENSP 246
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Db     171 -----IGGGSNSSAEVQALSKEVEDLKVSVDLLEKERDFYFSKLRDIEILCQTPELDDLP 225

Qy     247 VISGIIGILYATE------------------EGFAPPEDDEIEEHQQEDQD 279
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DT   17-OCT-2000  (first entry)
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KW   hybridisation assay; genetic mapping; gene expression control; promoter;
KW   termination sequence.
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PN   EP1033405-A2.
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PD   06-SEP-2000.
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Query Match 33.2%; Score 496; DB 21; Length 287;
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Qy     130 RQGQDVAPPPNPGDQIFNKS---KKLIGTAVPQRTSPTGPKNMQTSGRLSNVAPPCILRK 186
           | |:: :     |    :||     :    |     | |||  :: |
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Qy     247 VISGIIGILYATE----------EGFAPPEDDEIEEHQQEDQD 279
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Db    227 IVVAVKKILYATDANESVLEEAQECLNQSLGLEGYEEEGKEEEEEEEEEEEE 278
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XX
DT 17-OCT-2000 (first entry)
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XX
KW Protein identification; signal transduction pathway; metabolic pathway;
KW hybridisation assay; genetic mapping; gene expression control; promoter;
KW termination sequence.
XX
OS Arabidopsis thaliana.
XX
PN EP1033405-A2.
XX
PD 06-SEP-2000.
XX
PF 25-FEB-2000; 2000EP-0301439.
XX
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PR 06-MAY-1999; 99US-0132487.
PR 07-MAY-1999; 99US-0132863.
PR 11-MAY-1999; 99US-0134256.
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Query Match 33.2%; Score 496; DB 21; Length 293;
Best Local Similarity 36.3%; Pred. No. 8e-43;
Matches 106; Conservative 58; Mismatches 80; Indels 48; Gaps 6;

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Qy     187 NPPSARNGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRDIELICQEHESENSP 246
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Qy     247 VISGIIGILYATE------------------EGFAPPEDDEIEEHQQEDQD 279
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RESULT 14
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XX
AC AAG47797;
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DT 18-OCT-2000 (first entry)
XX
DE Arabidopsis thaliana protein fragment SEQ ID NO: 60282.
XX
KW Protein identification; signal transduction pathway; metabolic pathway;
KW hybridisation assay; genetic mapping; gene expression control; promoter;
KW termination sequence.
XX
OS Arabidopsis thaliana.
XX
PN EP1033405-A2.
XX
PD 06-SEP-2000.
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PF 25-FEB-2000; 2000EP-0301439.
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Query Match 32.4%; Score 483; DB 21; Length 316;
Best Local Similarity 35.3%; Pred. No. 2e-41;
Matches 108; Conservative 63; Mismatches 89; Indels 46; Gaps 7;

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Qy     127 LLARQGQDVAPPPNPGDQIFNKSKKLIGTAVPQRTSPTGPKNMQTSGRLS------NVAP 180
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Db     127 LLIQEQVKVF---LPSIQWFHHCRNY--NPVERRSRGGREKSVKGSSKISKSLQTNNMHH 181

Qy     181 PCILRKNPPSAR--------NGGHETDAQILELNQQLVDLKLTVDGLEKERDFYFSKLRD 232
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Qy     274 QQEDQD 279
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Db     302 EEEEEE 307


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ID   AAG47796 standard; Protein; 317 AA.
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AC   AAG47796;
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DT   18-OCT-2000  (first entry)
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DE   Arabidopsis thaliana protein fragment SEQ ID NO: 60281.
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KW   Protein identification; signal transduction pathway; metabolic pathway;
KW   hybridisation assay; genetic mapping; gene expression control; promoter;
KW   termination sequence.
XX
OS   Arabidopsis thaliana.
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PN   EP1033405-A2.
XX
PD   06-SEP-2000.
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PF   25-FEB-2000; 2000EP-0301439.
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